

WHAT IS CLAIMED IS:

1. A structure of seat with seat lifter in combination with a floor of vehicle, in which the seat includes a seat cushion on which a passenger is to sit on, comprising:

an upwardly extending support means fixedly provided on said floor of vehicle;

a pair of lifter links of said seat lifter provided in at least forward portion of said seat cushion, each of said pair of lifter links being at one end thereof pivotally connected with said upwardly extending support means at a pivot point so that another end thereof is movable about said pivot point, wherein said another end of said each of said pair of lifter links is connected with said seat cushion;

a horizontal bar element which is fixedly extended between said pair of lifter links, said horizontal bar element being disposed at a point in a forward buttocks slippage locus along which a buttocks portion of said passenger is to be slipped forwardly on said seat cushion in an emergency case such as a collision; and

a reinforcing means defined between said pair of lifter links and said upwardly extending support means so as to reinforce said pair of lifer links while allowing for movement of said pair of lifter links with respect to said upwardly extending support means.

2. The structure of sea with seat lifter as claimed in Claim 1, wherein said upwardly extending support means includes a wall portion facing to a lower portion of said reinforcing means, and wherein said reinforcing means includes a stopper means defined at the lower portion thereof, said stopper means being normally located adjacent to and out of contact with said wall portion of said upwardly extending support means, with such an arrangement that, when said pair of lifter links and said reinforcing means are about to be bent by a great load applied thereto from said passenger in said emergency case, said stopper means is immediately brought to contact with said wall portion, thereby preventing both said pair of lifter links and said reinforcing means against bending.

3. The structure of seat with seat lifter as claimed in Claim 1, which further includes

a pair of slide rails, each comprising a lower rail fixed to said floor of vehicle and an upper rail slidably fitted in said lower rail, wherein said lower rail has an upper wall portion and said upper rail having an upward extension area, wherein said upwardly extending support means comprises said upward extension area of said lower rail, and wherein, when said pair of lifter links and said reinforcing means are about to be bent by a great load applied thereto from said passenger in said emergency case, said stopper means is immediately brought to contact with said upper wall portion of said lower rail, thereby preventing both said pair of lifter links and said reinforcing means against bending.

4. The structure of seat with seat lifter as claimed in Claim 1, wherein each of said pair of lifter links has a midway portion between said one and another ends thereof, wherein said reinforcing means comprises a pair of reinforcing brackets, each having one end portion and another end portion and further extending adjacently alongside of the respective said pair of lifter links, wherein said pair of lifter links are each pivotally connected at said midway portion thereof with said one end portion of said each of said pair of reinforcing brackets by a connecting means, such that said another end portion of each of said pair of lifter links is movable about said pivot point, and wherein said another end portion of said each of said pair of reinforcing brackets is fixed to said upwardly extending support means fixedly provided on said floor of vehicle.

5. The structure of seat with seat lifter according to Claim 4, wherein said upwardly extending support means includes a wall portion facing to a lower end of each of said pair of reinforcing brackets, and wherein a stopper means is defined in said lower end of said each of said pair of reinforcing brackets, said stopper means being normally located adjacent to and out of contact with said wall portion of said upwardly extending support means fixedly provided on said floor of vehicle, with such an arrangement that, when said pair of lifter links and said pair of reinforcing brackets are about to be bent by a great load applied thereto from said passenger in said emergency case, said stopper means is immediately brought to contact with said wall portion of said upwardly extending support means, thereby preventing

both said pair of lifter links and said pair of reinforcing brackets against bending.

6. The structure of seat with seat lifter according to Claim 5, wherein said stopper means comprises at least one stopper piece integrally formed in said lower end of said each of said pair of reinforcing brackets, said at least one stopper piece extending outwardly and horizontally from said each of said pair of lifter links at a point above said wall portion of said upwardly extending support means.

7. The structure of seat with seat lifter according to Claim 4, wherein said connecting means comprises: an arcuate hole formed in said each of said pair of reinforcing brackets, said arcuate hole extending along a circle having a center at said pivot point; and a connecting pin which is slidably inserted through said arcuate hole and fixed to said midway portion of said each of said pair of lifter links.

8. The structure of seat with seat lifter as claimed in Claim 5, which further includes a pair of slide rails comprising a lower rail fixed to said floor of vehicle and an upper rail slidably fitted in said lower rail, wherein said lower rail has an upper wall portion and said upper rail having an upward extension area, wherein said upwardly extending support means comprises said upward extension area of said lower rail, wherein said upper wall portion of said lower rail corresponds to said wall portion of said upwardly extending support means, wherein said another end portion of each of said pair of reinforcing brackets is fixed to said upward extension area of said lower rail, and wherein, when said pair of lifter links and said pair of reinforcing brackets are about to be bent by a great load applied thereto from said passenger in said emergency case, said stopper means is immediately brought to contact with said upper wall portion of said lower rail, thereby preventing both said pair of lifter links and said pair of reinforcing brackets against bending.

9. The structure of seat with seat lifter as claimed in Claim 1, wherein said reinforcing means comprises a lower extension area formed in said each of said pair of lifter

links, and wherein said lower extension area is movably connected by a connecting means with said upwardly extending support means, so that said another end portion of each of said pair of lifter links is movable about said pivot point.

10. The structure of seat with seat lifter according to Claim 1, wherein said reinforcing means comprises a lower extension area formed in said each of said pair of lifter links, wherein said lower extension area is movably connected by a connecting means with said upwardly extending support means fixedly provided on said floor of vehicle, so that said another end portion of each of said pair of lifter links is movable about said pivot point, wherein said upwardly extending support means includes a wall portion facing to a lower end of each of said pair of lifter links, and wherein a stopper means is defined in said lower end of said lower extension area of each of said pair of lifter links, said stopper means being normally located adjacent to and out of contact with said wall portion of said upwardly extending support means, with such an arrangement that, when said pair of lifter links are about to be bent by a great load applied thereto from said passenger in said emergency case, said stopper means is immediately brought to contact with said wall portion of said upwardly extending support means, thereby preventing said pair of lifter links as well as said lower extension area against bending.

11. The structure of seat with seat lifter according to Claim 10, wherein said stopper means comprises at least one stopper piece integrally formed in said lower end of said lower extension area of each of said pair of lifter links, said at least one stopper piece extending outwardly and horizontally from said each of said pair of lifter links at a point above said wall portion of said upwardly extending support means.

12. The structure of seat with seat lifter according to Claim 9, which further includes a pair of slide rails, each comprising a lower rail fixed to said floor of vehicle and an upper rail slidably fitted in said lower rail, wherein said lower rail has an upper wall portion and said upper rail having an upward extension area, wherein said upwardly extending support means

comprises said upward extension area of said lower rail, wherein said upper wall portion of said lower rail corresponds to said wall portion of said upwardly extending support means, and wherein, when said pair of lifter links are about to be bent by a great load applied thereto from said passenger in said emergency case, said stopper means is immediately brought to contact with said upper wall portion of said lower rail, thereby preventing both said pair of lifter links as well as said lower extension area against bending,

13. The structure of seat with seat lifter according to Claim 12, wherein said stopper means comprises at least one stopper piece integrally formed in said lower end of said lower extension area of each of said pair of lifter links, said at least one stopper piece extending outwardly and horizontally from said each of said pair of lifter links at a point above said upper wall portion of said lower rail.

14. The structure of seat with seat lifter according to Claim 10, wherein said connecting means comprises: an arcuate hole formed in said lower extension area of said each of said pair of lifter links, said arcuate hole extending along a circle having a center at said pivot point; and a connecting pin which is slidably inserted through said arcuate hole and fixed to said upwardly extending support means.